Claims

[c1] 1. A method for creating a relational text index, the method comprising the steps of:
accessing a natural language text document,
parsing said document to identify grammatical parts sentences in said document,
applying caseframes to said parsed sentences to generate caseframe extractions,
caseframes being syntactic structures that recognize local area context,
performing thematic role assignment on said caseframe extractions to generate thematic role extractions,
performing unification for each sentence that generates more than one thematic role extraction to generate a single unified representation of each sentence, and
utilizing sentence information to build a relational text index that is usable by a computer system.

[c2] 2. A method as recited in claim 1 wherein said parsing step produces a diagrammed sentence.

[c3] 3. A method as recited in claim 2 further comprising the step of displaying a graphical representation of said diagrammed sentence.

[c4] 4. A method as recited in claim 2 wherein said parsing step produces an output selected from the group consisting of noun phrases, verb phrases, prepositional phrases, adverbial phrases, adjectival phrases, clauses, and combinations of them.

[c5] 5. A method as recited in claim 1 wherein said step of applying caseframes extracts information of particular interest to a user from at least some of said sentences.

[c6] 6. A method as recited in claim 1 wherein at least some of said caseframes are based on both a trigger term and a syntactic term.

[c7] 7. A method as recited in claim 1 wherein said thematic role assignment is performed by translating raw caseframe-extracted elements to specific thematic roles.

[c8] 8. A method as recited in claim 1 wherein said thematic role assignment includes assigning roles selected from the group consisting of actions, actors, objects, experiencers, and specifiers.

[c9] 9. A method as recited in claim 1 wherein said thematic assignment uses conceptual thematic roles defined according to a particular caseframe useful in a specific subject area.

[c10] 10. A method as recited in claim 1 wherein said step of building a relational text index includes the step of storing information selected from the group consisting of sentence information, semantic hierarchy information, semantic category information, generic thematic role information and specifier thematic role information.

[c11] 11. A method as recited in claim 1 wherein said step of building a relational text index includes the step of appending data from one of said unification step and thematic role assignment step to said relational text index.

[c12] 12. A method as recited in claim 1 wherein said step of building a relational text index includes the step of, for each actor, action or object in a sentence, append it's raw form and morphological root form to said relational text index, and information for locating said sentence in a document.

[c13] 13. A method as recited in claim 1 wherein said step of building a relational text index includes the step of, for each specifier role, record said role's raw form, a link to an extracted role specified by specifier, and a full specifier phrase for said specifier role in said relational text index.

[c14] 14. A method as recited in claim 1 wherein said step of building a relational text index includes the step of creating key value for each record and recording it in said relational text index.

[c15] 15. A method as recited in claim 1, wherein if said parsing step was performed using a parser which utilizes a semantic hierarchy parser, creating a record for each node in

the hierarchy, and creating a record for each term containing its name and name of its semantic class.

[c16] 16. A method for creating a relational text index, the method comprising the steps of:
accessing a corpa of natural language text documents,
for a plurality of said documents, parsing sentences in said documents to generate diagrammed sentences, applying caseframes to said diagrammed sentences to generate caseframe extractions,
performing thematic role assignment on said caseframe extractions to generate thematic role extractions, said thematic role assignment being performed by translating raw caseframe-extractions to specific thematic roles, and
accessing a relational text index file, and
appending thematic role information to said relational text index file;
wherein said parsing step produces an output selected from the group consisting of noun phrases, verb phrases, prepositional phrases, adverbial phrases, adjectival phrases, clauses, and combinations of them.

[c17] 17. A method as recited in claim 16 wherein at least one of said caseframes is based on both a trigger term and a syntactic term.

[c18] 18. A method as recited in claim 16 further comprising the step of performing unification for each sentence that generates more than one thematic role extraction to generate a single unified representation of each sentence.

[c19] 19. A method as recited in claim 16 wherein said thematic role assignment includes assigning roles selected from the group consisting of actions, actors, objects, experiencers, and specifiers.

[c20] 20. A method as recited in claim 16 wherein said step of building a relational text index includes the step of, for each specifier role, record said role's raw form, a link to an extracted role specified by specifier, and a full specifier phrase for said specifier role in said relational text index.